

**AMENDMENTS TO THE CLAIMS**

Claims 1, 3, 14, 20, 22-24, and 28 have been amended. New claims 30-35 have been added. Claim 21 has been canceled. The following is a complete listing of the claims, which replaces all previous versions and listings of the claims.

1. (currently amended) A method of configuring access to a failed memory module in a redundant memory system, the method comprising:

determining a type of the error; ~~and~~

configuring access to the memory module based on said error type to preserve the redundancy of the memory system; and

insuring write access to the memory module is not prohibited.

2. (original) The method of claim 1, wherein configuring access comprises:

enabling access to the failed memory module when the error type is determined to be soft;

and

disabling access to the failed memory module when the error type is determined to be hard.

3. (currently amended) The method of claim 2, wherein configuring access further comprises:

prior to enabling access, disabling read access to the failed memory module; ~~and~~

~~insuring write access is not prohibited.~~

4. (original) The method of claim 1, wherein configuring access further comprises:  
logging information regarding said error; and  
determining said error type based at least on said error.
5. (original) The method of claim 1, wherein configuring access further comprises:  
reconstructing data that caused the failed memory module to fail; and  
servicing a memory request with said reconstructed data.
6. (original) The method of claim 4, wherein configuring access further comprises:  
scrubbing the failed memory module with said reconstructed data.
7. (original) The method of claim 1, wherein said determining said error type comprises:  
determining said error type based on said error and prior errors, if any, incurred by the  
failed memory module.
8. (original) The method of claim 6, wherein the error type is determined based on an error  
threshold.
9. (original) The method of claim 2, wherein enabling access comprises:  
enabling access to the failed memory module when an error threshold is not exceeded.

10. (original) The method of claim 2, wherein disabling access comprises:  
disabling access to the failed memory module when an error threshold is exceeded.
11. (original) The method of claim 7, wherein said error threshold comprises an error rate.
12. (original) The method of claim 7, wherein said error threshold comprises a quantity of errors.
13. (original) The method of claim 1, wherein configuring access comprises:  
disabling read access to the failed memory module;  
configuring access to the failed memory module based on said error type, comprising:  
continuing to disable read access to the failed memory module when the error type  
is determined to be hard; and  
enabling read access to the failed memory module when the error type is  
determined to be soft.
14. (currently amended) A computer system comprising:  
a redundant memory system comprising:  
a plurality of data storage devices; and  
a memory controller that accesses said plurality of data storage devices; and

an error-type memory controller that configures said access to preserve the redundancy of the memory system and insure write access is not prohibited, such that said memory controller can continue to access a failed one of said plurality of data storage devices that incurred a soft error.

15. (original) The computer system of claim 14, wherein said data storage devices comprise memory modules.

16. (original) The computer system of claim 14, wherein the error-type memory controller comprises:

an error-type identifier that determines a type of error incurred by the failed data storage device, wherein the error-type is one of either a hard error and the soft error; and

a memory module access configurator that configures access and redundant memory controller has to the failed data storage device based on the type of memory error.

17. (original) The computer system of claim 16, wherein the error-type identifier determines if the error is soft based on an error threshold.

18. (original) The computer system of claim 17, wherein the error threshold comprises an error rate.

19. (original) The computer system of claim 17, wherein the error threshold comprises a quantity of errors that can occur in a predetermined period of time.

20. (currently amended) A redundant memory system comprising:  
redundant memory logic that accesses one of a plurality of data storage devices; and  
a memory controller that independently controls read and write access to a failed one of  
said plurality of data storage devices based on whether an error incurred by said failed data  
storage device is a hard error or a soft error, wherein the memory controller is further configured  
to preserve the redundancy of the memory system and insure write access is not prohibited.
21. (canceled)
22. (currently amended) The redundant memory system of claim ~~21~~ 20, wherein said plurality  
of data storage devices comprise a plurality of memory modules.
23. (currently amended) The redundant memory system of claim ~~21~~ 20, wherein said memory  
controller is responsive to a memory error-type identifier that analyzes said error incurred by said  
failed data storage device, wherein said memory error-type identifier retains information regarding  
errors incurred in said plurality of data storage devices, and utilizes said retained information to  
determine whether said error is a hard error or a soft error.
24. (currently amended) The redundant memory system of claim ~~23~~ 22, wherein said error-  
type identifier is implemented in software.

25. (original) The redundant memory system of claim 17, wherein the redundant memory system comprises a RAM (redundant array of independent memory) memory system.

26. (original) The redundant memory system of claim 19, wherein the memory error type identifier makes said determination based on an error threshold.

27. (original) The redundant memory system of claim 22, wherein said error threshold comprises an error rate.

28. (original) The redundant memory system of claim 22, wherein said error threshold comprises a quantity of errors that can occur in each of said plurality of data storage devices over at least one predetermined period of time.

29. (currently amended) A redundant memory system for restoring access to a memory module that incurred an error, comprising:

means for determining a type of the error; and

means for preserving the redundancy of the memory system and insuring write access is not prohibited; and

means for restoring access to the memory module when said type of error is determined to be a soft error.

30. (new) A method of configuring access to a failed memory module, comprising:

discontinuing read access to the failed memory module;  
continuing write access to the failed memory module;  
reconstructing data from the failed memory module;  
scrubbing the failed memory module with the reconstructed data; and  
configuring access to the failed memory module based on an error type.

31. (new) The method of claim 30, comprising logging an error that caused the memory module to fail.
32. (new) The method of claim 30, wherein configuring access comprises discontinuing read access to the failed memory module if the error type is hard.
33. (new) The method of claim 30, wherein configuring access comprises discontinuing write access to the failed memory module if the error type is hard.
34. (new) The method of claim 30, wherein configuring access comprises continuing read access to the failed memory module if the error type is soft.
35. (new) The method of claim 30, comprising determining the error type.